Mininvasive treatment for gallbladder and common bile duct stones.

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Background: common bile duct (CBD) stones are present in about 5-12% of patients with symptomatic gallstones disease. In many cases choledocholitiasis is predictable on the basis of clinical, biochemical and radiological examination. Only 1% of patients with normal liver function tests and normal bile duct calibre at ultrasound have CBD stones, probably being bile duct calibre > 10 mm the most predictable sign.
In the era of minimally invasive surgery the ideal management of CBD stones remains controversial. Endoscopic retrograde cholangiopancreatography (ERCP) is probably the most utilized method of clearance of the CBD, but questions remain about the timing of its.
Methods: all patients with diagnosed CBD stones during the period ranging from January 2006 and October 2010 where treated with the so called “rendez vous technique” consisting of ERCP and endoscopic sphincterotomy (ES) performed during laparoscopic cholecistectomy (VLC).
A total of 92 patients where treated in this way, 38 males and 54 females with a mean age of 54 years and 6 mounths.
In 21 patients considered at risk of having choledocholitiaisis, in urgency, we peformed an intra operative cholangiography (IOC) to confirm the diagnosis.
The procedure consist of a VLC during wich a guide wire is passed trough the cistc duct and recovered by an endoscopic polypectomy loop in the duodenal lumen and, after extraction is cannulized by a sphincterotome with subsequent ES and bile duct clearance.
Results: there were no cases of conversion to open surgery, ERCP failure rate was 0%. Mean operation time was 94 minutes (range 70-150), a mechanical lithotripsy was necessary in 7 cases with presence of stones greater than 10 mm of diameter.
Only in 3 cases the CBD clearance was uncomplete needing a nasoduodenal biliary tube left in place for further 48-72 hours.
The “endoscopic” complication where 2 cases of self limiting bleeding of the papilla after sphyncterotomy, 6 cases of increase of amylase levels returned in range spontaneously in 48 hours and 1 case of acute pancreatitis resolved with medical treatment in 3-4 days. During the period a recourrence of CBD was encountered in 3 patients, all treated with ERCP and presented at a mean follow up of 27 months. Others complication where 1 case of pulmonary disease and 1 atrial fibrillation.
The mean hospital stay is 4.2 days, with a range 3-16 days.
Discussion: VLC is the reference treatment of gallbladder stones but at present there isn’t consensus about the ideal management of CBD stones. ERCP remains the prevailing method of treating CBD stones but the ideal timing in respect to VLC is not clearly defined. Preoperative ERCP followed by VLC probably is the most frequently applied strategy but necessitate of 2 interventions, VLC followed by ERCP presents the risk of a third procedure if the endoscopist fails to clear the CBD. Theoretically the rendez vous seems to optimize the therapeutic strategy increasing comfort of the patient undergoing a single minimal invasive treatment with less discomfort and reducing hospital stay.
At our department we haven’t great organization problem because the most experienced laparoscopic surgeon is also able to perform ERCP reducing possible organization conflict between surgeon and gastroenterologist.
Total morbidity is higher in two stage treatment due to post ERCP pancreatitis and related problems, in the one stage management the presence of a guidewire facilitates the cannulation of the papilla also in difficult cases, this aspect reduces the risk of inadvertent cannulation of the pancreatic duct reducing greatly the rate of pancreatic complication.

There aren’t clear contra indication for this approach but surely the presence of a massive lithiasis is a difficult technical situation, the difficulty being not so much the number of the stones but expecially the size of them.
In our opinion this procedure reduces the risk of repeated or unnecessary procedure reducing also the comulable risk of iatrogenic damage.
We think that laparoscopic cholecystectomy with intra operative ERCP probably is the most economically advantageous approach, the economic advantages isn’t due to the procedure itself but is related to reduction of hospital stay.
Conclusion: in the management of CBD stones laparo-endoscopic rendez vous is associated with higher success rate, shorter hospital stay and less cost compared with sequential procedure.

Literature:

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